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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,609	LEE ET AL.	
	Examiner	Art Unit	
	Christopher Crutchfield	2466	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *65-92* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *65-92* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claims 65, 69-75, 79-84, 88, and 89** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Gonno I*, et al. (Y. Gonno, F. Nishio, T. Tsunoda, Y. Yamagishi, White Paper on Integrated Broadband Environment for Personalized TV Experience (IBEX) - Preliminary Edition, 2001, Pages 1-4) in view of Lee et al. (H. Lee, J. Kim, K. Kang and J. Kim, Package and Component Schema using MPEG-21 DID, Proposal for the TV Anytime Forum, January 2004, Pages 1-16).

Regarding claims 65 and 84, *Gonno I* discloses A targeting service providing system (TSPS) having non-transitory computer readable recording medium with coded instructions for carrying out a method for identifying components in a package metadata, the TSPS comprising and A non-transitory computer readable recording medium (CRRM) with coded instructions for carrying out a method for identifying components in a package metadata, the CRRM comprising:

a. A. coded instructions for assigning, into the package metadata, an identical content reference identifier (CRID) for each of the components that have identical contents and that have different bit expressions (Page 64, Sections 3.1.1, 3.1.2, Pages 65-66, Sections 4.3, 5.1). (The system of *Gonno I* discloses a system for media and metadata distribution where each piece of "content" [i.e. program - See Section 3.1, Page 64] is associated with a CRID for identifying the piece of content [Page 64, Section 3.1.1]. Each program/CRID may then have multiple “media instances” of the particular content, such as instances at different times, with different codings [i.e. “bit expressions] or from different sources. That is, the content identifier associated with a particular CRID be resolved into a particular “media instance” [Page 64, Section 3.1.1, "...CRIDs may be

resolved into media locations of actual media instances to browse contents...] among multiple media instances for transmitting the same program at different times or using different mime types/coding [See Pages 65-66, Section 5.1, 5.2, 5.3.1 and 5.3.2]. Each of the media instances may be associated with a particular path [i.e. URL, URI, exc.] for accessing the streamed data [See Page 64, Section 3.1.2] and with a media instance identifier [i.e. instance metadata identifier] [Section 5.1 "Metadata Description" - "Each description will be associated with contents or other resources by referencing there identifiers, e.g. content reference identifiers or *media instance identifier*."]. Therefore a single CRID is associated with multiple media instances with each instance being distinguishable by its unique instance metadata identifier. The system of *Gonno* further discloses that the instance metadata identifier associated with a content media instance includes information concerning the "media type" [Section 5.3.1]. The media type is referenced to the MIME type of the content and represents the encoding/format of the media [Page 66, Section 5.1, "Media Instance"- "…certain media resources must be allocated, which will be characterized by the media type, such as MIME type…Each media instance associated with a media type will be stored in the media database."] and is analogous to the "bit expressions" of the application [See, for example, Applicant's Specification, Page 3, Lines 5-33 - Showing bit expressions to be mime type descriptors of "Audio_Wav" and "Audio_MP3"]. Therefore, one CRID may be associated with multiple components having the same content, but having different bit expressions, with each bit expression having a separate instance metadata identifier. Finally, the generated metadata is replicated/transmitted to the browser/user terminal [Page 66, Section 5.2].)

b. Coded instructions for assigning, into the package metadata, different instance metadata identifiers (IMIs) to each of the components that have identical contents and that have different bit expressions (Section 5.1 - See (a), Supra).

c. Coded instructions for transmitting the package metadata to a user terminal and coded instructions for selecting the identified components in accordance to a usage environment of the user terminal (Page 66, Section 5.2 and 5.3.2). (The system of *Gonno I* further discloses the replication of this metadata to the end user browser/terminal [See Section 5.2 - Showing the replication of the metadata to the user terminal]. When the end user browser/user terminal receives the data via the receiving unit, it then proceeds to decode the metadata and uses the decoded metadata description to identify a content media instance using the CRID and instance metadata identifier of interest [Page 65, Fig. 3 and the "Metadata Description" portion of Section 5.2 - Showing the use of the Metadata Description to locate the media instance via the media instance identifier] [Page 66, Section 5.3.2]. The content media instance is then acquired by the user browser/terminal using the location of the instance stored in the content metadata of the content instance [Page 66, Section 5.3.1]. Finally, the system of *Gonno* I further discloses that the user terminal may select the component/media instance in accordance with the user environment/capabilities of the endpoint terminal [Page 66, Section 5.3.2, Resource Capability - "On the other hand, media type (video, audio or text) or media format such as MIME type, will be selected or transformed dependent on the presentation resource capability"].)

d. Coded instructions for receiving the package metadata at the user terminal (Page 66, Section 5.2 and 5.3.2 - See (c), supra).

e. Coded instructions for decoding the package metadata, coded instructions for identifying the components in the package metadata by using the identical CRID and the different IMIs (Page 66, Section 5.2 and 5.3.2 - See (c), supra).

Gonno I fails to disclose the use of packaging for an instance metadata identifier used for identifying the content reference identifier. In the same field of endeavor, *Lee* discloses the use of packaging for an instance metadata identifier used for identifying the content reference identifier (Page 7, The Table, Lowest Row, "Resource" is associated with a "ID & CRID", Page 10, Bottom Box, The ID Attributes are associated with both an "id" and a "crid"). (The system of *Lee* discloses encoding ID and CRID information in a package description of metadata [See Pages 4-6, Particularly Fig. 4 and Pages 6-7, Sections 4.1-4.2]. Also included in the package are references to multiple different format types for a particular object [Pages 9-12] [See Page 9, The figure - Showing multiple instances of the same format] [See also Page 10 - Showing the conversion of the MPEG-21 information to the TV-Anytime Format including the mime type/bit expression as the ID]. The system of *Lee* furher discloses the linking of an ID and a CRID in metadata package, therefore the ID [i.e. instance metadata identifier] may be used to identify the associated content reference identifier [Page 10, The box at the bottom of page showing ID_ATTRS links the ID and CRID].)

Therefore, since *Lee* suggests packaging instance metadata in a Package Description utilizing a linked CRID and ID and *Gonno I* discloses a system which utilizes a CRID and a separate metadata instance identifier to uniquely identify media items, it would have been

obvious to a person of ordinary skill in the art at the time of the invention to combine the instance packaging of *Lee* with the system of *Gonno I* by packaging the CRID and separate instance identifier of *Gonno I* in a single package description, as taught by *Lee* and by encoding and transmitting the package to the user, as taught by *Gonno I*. The motive to combine is to allow the unique representation of media instances with the same CRID by using an additional instance identifier that is linked to the common CRID.

Gonno I as modified by *Lee* fails to disclose coded instructions for dividing the package metadata into fragmented units and coded instructions for encoding and encapsulating the package metadata. In the same field of endeavor, The Specification, Part B discloses coded instructions for dividing the package metadata into fragmented units and coded instructions for encoding and encapsulating the package metadata (Pages 12-18, Sections 4.1-4.2, Pages 42-44). (The system of The Specification, Part B discloses the fragmentation and encapsulation of metadata for transmission in a one way or broadcast system [Pages 12-18, Sections 4.1-4.2, Pages 42-44]. To accomplish this, The Specification, Part B first fragments the data into several self consistent units of data [See Page 14, Section 4.2.1]. Each of the fragments of data is then grouped in an encapsulated "container" and transmitted to the user terminal via a unidirectional or bi-directional network [Page 14, Section 4.2.1, Particularly Fig. 3] [See also Page 42, Section 4.5.1 and Pages 45-46, Section 4.6]. Each of the individual metadata fragments is self consistant and may be updated or deleted separately from the other fragments [Page 50, Section 4.7.3].)

Therefore, since The Specification, Part B suggests the fragmentation, grouping and encapsulation of metadata, it would have been obvious to a person of ordinary skill in the art at the time of the invention to implement the fragmentation and encapsulation of The Specification, Part B into the system of *Gonno I* as modified by *Lee* by fragmenting into self consistent,

individually updateable fragments and grouping and encapsulating the fragments for transmission to the user terminal, as taught by The Specification, Part B. The motive to combine is to allow for easy transport and update of the metadata.

Regarding claim 69, *Gonno I* discloses assigning a CRID for each of the components that have identical contents and that have different bit expressions and for assigning the IMIs to each of the components that have identical contents and that have different bit expressions (Pages 65-66 - See Claim 65, Supra).

Gonno I fails to disclose a package metadata generator that carries out the coded instructions for assigning the CRID for each of the components that have identical contents and that have different bit expressions and for assigning the IMIs to each of the components that have identical contents and that have different bit expressions. In the same field of endeavor, *Lee* discloses a package metadata generator that carries out the coded instructions for assigning the CRID for each of the components that have identical contents and that have different bit expressions and for assigning the IMIs to each of the components that have identical contents and that have different bit expressions (Page 7, The Table, Lowest Row, "Resource" is associated with a "ID & CRID", Page 10, Bottom Box, The ID Attributes are associated with both an "id" and a "crid"). (The system of *Lee* discloses encoding ID and CRID information in a package description of metadata including the generation of packaged metadata for transmission, which would include assigning the appropriate ID and CRID values that are a part of the metadata package [See Pages 4-6, Particularly Fig. 4 and Pages 6-7, Sections 4.1-4.2]. Also included in the package are references to multiple different format types for a particular object [Pages 9-12] [See Page 9, The figure - Showing multiple instances of the same format] [See also Page 10 - Showing the conversion of the MPEG-21 information to the TV-Anytime Format including the mime type/bit expression as the ID]. The system of *Lee* further

discloses the linking of an ID and a CRID in metadata package, therefore the ID [i.e. instance metadata identifier] may be used to identify the associated content reference identifier [Page 10, The box at the bottom of page showing ID_ATTRS links the ID and CRID].)

Therefore, since *Lee* suggests packaging instance metadata in a Package Description utilizing a linked CRID and ID and *Gonno I* discloses a system which utilizes a CRID and a separate metadata instance identifier to uniquely identify media items, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the instance packaging of *Lee* with the system of *Gonno I* by packaging the CRID and separate instance identifier of *Gonno I* in a single package description, as taught by *Lee* and by encoding and transmitting the package to the user, as taught by *Gonno I*. The motive to combine is to allow the unique representation of media instances with the same CRID by using an additional instance identifier that is linked to the common CRID.

Regarding claim 70, *Gonno I* as modified by Lee, in claim 65, supra, discloses a TSPS wherein TSPS comprises an encoding and encapsulating using coded instructions for encoding and encapsulating the package metadata.

Gonno I as modified by Lee fails to disclose the use of a discrete software "unit" for encoding and encapsulating the package metadata such that the TSPS further comprises an encoding and encapsulating unit that carries out the coded instructions for encoding and encapsulating the package metadata. However, it is officially noted that the use of software modules to form "units" of software was well known in the art at the time of the invention. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to implement the encoding and encapsulating software of *Gonno I* as modified by Lee by using a separate software module. The motive to combine is to allow the separate software

module to be separately coded and debugged, thereby reducing development time and expense.

Regarding claim 71, *Gonno I* discloses a transmitter that carries out instructions for transmitting the package metadata data (Page 66, Section 5.2 and 5.3.2 - See claim 65, Supra).

Gonno I as modified by Lee fails to disclose the use of a discrete software "unit" for transmitting the package metadata such that the TSPS comprises a transmitter unit that carries out the coded instructions for transmitting the package metadata. However, it is officially noted that the use of software modules to form "units" of software was sell known in the art at the time of the invention. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to implement the transmission software of *Gonno I* by using a separate software module. The motive to combine is to allow the separate software module to be separately coded and debugged, thereby reducing development time and expense.

Regarding claim 72, *Gonno I* discloses a receiver that carries out the coded instructions for receiving a package metadata generated according to a condition of a usage environment by using the IMI along with the CRID as a component identifier for components that have identical contents and different bit expressions (Page 66, Section 5.2 and 5.3.2 - See claim 65, supra).

Gonno I as modified by Lee fails to disclose the use of a discrete software "unit" for receiving the package metadata such that the TSPS comprises a receiving unit that carries out the coded instructions for receiving a package metadata generated according to a condition of a usage environment by using the IMI along with the CRID as a component identifier for components that have identical contents and different bit expressions. However, it is officially noted that the use of software modules to form "units" of software was sell known in the art at the time of the invention. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to implement the transmission software of *Gonno I* by using a

separate software module. The motive to combine is to allow the separate software module to be separately coded and debugged, thereby reducing development time and expense.

Regarding claim 73, *Gonno I* discloses a decoding unit that carries out the coded instructions for decoding the package metadata, such that the user terminal consumes the components by using the IMI along with the CRID as a component identifier for components that have identical contents and different bit expressions (Page 66, Section 5.2 and 5.3.2 - See claim 65, supra).

Gonno I as modified by Lee fails to disclose the use of a discrete software "unit" for decoding the package metadata such that the TSPS comprises a decoding unit that carries out the coded instructions for decoding the package metadata, such that the user terminal consumes the components by using the IMI along with the CRID as a component identifier for components that have identical contents and different bit expressions. However, it is officially noted that the use of software modules to form "units" of software was well known in the art at the time of the invention. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to implement the transmission software of *Gonno I* by using a separate software module. The motive to combine is to allow the separate software module to be separately coded and debugged, thereby reducing development time and expense.

Regarding claims 74 and 88, *Gonno I* discloses A targeting service providing system (TSPS) having non-transitory computer readable recording medium with coded instructions for carrying out a method for identifying components in a package metadata, the TSPS comprising and A non-transitory computer readable recording medium (CRRM) with coded instructions for carrying out a method for identifying components in a package metadata, the CRRM comprising:

a. A. coded instructions for assigning, into the package metadata, an identical content reference identifier (CRID) for each of the components that have identical contents and that have different bit expressions (Page 64, Sections 3.1.1, 3.1.2, Pages 65-66, Sections 4.3, 5.1). (The system of *Gonno I* discloses a system for media and metadata distribution where each piece of "content" [i.e. program - See Section 3.1, Page 64] is associated with a CRID for identifying the piece of content [Page 64, Section 3.1.1]. Each program/CRID may then have multiple "media instances" of the particular content, such as instances at different times, with different codings [i.e. "bit expressions] or from different sources. That is, the content identifier associated with a particular CRID be resolved into a particular "media instance" [Page 64, Section 3.1.1, "...CRIDs may be resolved into media locations of actual media instances to browse contents...] among multiple media instances for transmitting the same program at different times or using different mime types/coding [See Pages 65-66, Section 5.1, 5.2, 5.3.1 and 5.3.2]. Each of the media instances may be associated with a particular path [i.e. URL, URI, exc.] for accessing the streamed data [See Page 64, Section 3.1.2] and with a media instance identifier [i.e. instance metadata identifier] [Section 5.1 "Metadata Description" - "Each description will be associated with contents or other resources by referencing there identifiers, e.g. content reference identifiers or *media instance identifier.*"]. Therefore a single CRID is associated with multiple media instances with each instance being distinguishable by its unique instance metadata identifier. The system of *Gonno* further discloses that the instance metadata identifier associated with a content media instance includes information concerning the "media type" [Section 5.3.1]. The media type is referenced to the MIME type of the content and represents the encoding/format of the media [Page 66, Section 5.1, "Media Instance"- "...certain media resources must be

allocated, which will be characterized by the media type, such as MIME type…Each media instance associated with a media type will be stored in the media database."] and is analogous to the "bit expressions" of the application [See, for example, Applicant's Specification, Page 3, Lines 5-33 - Showing bit expressions to be mime type descriptors of "Audio_Wav" and "Audio_MP3"]. Therefore, one CRID may be associated with multiple components having the same content, but having different bit expressions, with each bit expression having a separate instance metadata identifier. Finally, the generated metadata is replicated/transmitted to the browser/user terminal [Page 66, Section 5.2].)

b. Coded instructions for assigning, into the package metadata, different instance metadata identifiers (IMIs) to each of the components that have identical contents and that have different bit expressions (Section 5.1 - See (a), Supra).

c. Coded instructions for transmitting the package metadata to a user terminal (Page 66, Section 5.2 and 5.3.2). (The system of *Gonno I* further discloses the replication of this metadata to the end user browser/terminal [See Section 5.2 - Showing the replication of the metadata to the user terminal]. When the end user browser/user terminal receives the data via the receiving unit, it then proceeds to decode the metadata and uses the decoded metadata description to identify a content media instance using the CRID and instance metadata identifier of interest [Page 65, Fig. 3 and the "Metadata Description" portion of Section 5.2 - Showing the use of the Metadata Description to locate the media instance via the media instance identifier] [Page 66, Section 5.3.2]. The content media instance is then acquired by the user browser/terminal using the location of the instance

stored in the content metadata of the content instance [Page 66, Section 5.3.1]. Finally, the system of *Gonno I* further discloses that the user terminal may select the component/media instance in accordance with the user environment/capabilities of the endpoint terminal [Page 66, Section 5.3.2, Resource Capability - "On the other hand, media type (video, audio or text) or media format such as MIME type, will be selected or transformed dependent on the presentation resource capability"].)

Gonno I fails to disclose the use of packaging for an instance metadata identifier used for identifying the content reference identifier. In the same field of endeavor, *Lee* discloses the use of packaging for an instance metadata identifier used for identifying the content reference identifier (Page 7, The Table, Lowest Row, "Resource" is associated with a "ID & CRID", Page 10, Bottom Box, The ID Attributes are associated with both an "id" and a "crid"). (The system of *Lee* discloses encoding ID and CRID information in a package description of metadata [See Pages 4-6, Particularly Fig. 4 and Pages 6-7, Sections 4.1-4.2]. Also included in the package are references to multiple different format types for a particular object [Pages 9-12] [See Page 9, The figure - Showing multiple instances of the same format] [See also Page 10 - Showing the conversion of the MPEG-21 information to the TV-Anytime Format including the mime type/bit expression as the ID]. The system of *Lee* furher discloses the linking of an ID and a CRID in metadata package, therefore the ID [i.e. instance metadata identifier] may be used to identify the associated content reference identifier [Page 10, The box at the bottom of page showing ID_ATTRS links the ID and CRID].)

Therefore, since *Lee* suggests packaging instance metadata in a Package Description utilizing a linked CRID and ID and *Gonno I* discloses a system which utilizes a CRID and a separate metadata instance identifier to uniquely identify media items, it would have been

obvious to a person of ordinary skill in the art at the time of the invention to combine the instance packaging of *Lee* with the system of *Gonno I* by packaging the CRID and separate instance identifier of *Gonno I* in a single package description, as taught by *Lee* and by encoding and transmitting the package to the user, as taught by *Gonno I*. The motive to combine is to allow the unique representation of media instances with the same CRID by using an additional instance identifier that is linked to the common CRID.

Gonno I as modified by *Lee* fails to disclose coded instructions for dividing the package metadata into fragmented units and coded instructions for encoding and encapsulating the package metadata. In the same field of endeavor, The Specification, Part B discloses coded instructions for dividing the package metadata into fragmented units and coded instructions for encoding and encapsulating the package metadata (Pages 12-18, Sections 4.1-4.2, Pages 42-44). (The system of The Specification, Part B discloses the fragmentation and encapsulation of metadata for transmission in a one way or broadcast system [Pages 12-18, Sections 4.1-4.2, Pages 42-44]. To accomplish this, The Specification, Part B first fragments the data into several self consistent units of data [See Page 14, Section 4.2.1]. Each of the fragments of data is then grouped in an encapsulated "container" and transmitted to the user terminal via a unidirectional or bi-directional network [Page 14, Section 4.2.1, Particularly Fig. 3] [See also Page 42, Section 4.5.1 and Pages 45-46, Section 4.6]. Each of the individual metadata fragments is self consistant and may be updated or deleted separately from the other fragments [Page 50, Section 4.7.3].)

Therefore, since The Specification, Part B suggests the fragmentation, grouping and encapsulation of metadata, it would have been obvious to a person of ordinary skill in the art at the time of the invention to implement the fragmentation and encapsulation of The Specification, Part B into the system of *Gonno I* as modified by *Lee* by fragmenting into self consistent,

individually updateable fragments and grouping and encapsulating the fragments for transmission to the user terminal, as taught by The Specification, Part B. The motive to combine is to allow for easy transport and update of the metadata.

Regarding claims 75 and 89, *Gonno I* discloses A targeting service providing system (TSPS) having non-transitory computer readable recording medium with coded instructions for carrying out a method for identifying components in a package metadata, the TSPS comprising and A non-transitory computer readable recording medium (CRRM) with coded instructions for carrying out a method for identifying components in a package metadata, the CRRM comprising:

a. Coded instructions for receiving the package metadata at the user terminal (Page 66, Section 5.2 and 5.3.2). (The system of *Gonno I* further discloses the replication of this metadata to the end user browser/terminal [See Section 5.2 - Showing the replication of the metadata to the user terminal]. When the end user browser/user terminal receives the data via the receiving unit, it then proceeds to decode the metadata and uses the decoded metadata description to identify a content media instance using the CRID and instance metadata identifier of interest [Page 65, Fig. 3 and the "Metadata Description" portion of Section 5.2 - Showing the use of the Metadata Description to locate the media instance via the media instance identifier] [Page 66, Section 5.3.2]. The content media instance is then acquired by the user browser/terminal using the location of the instance stored in the content metadata of the content instance [Page 66, Section 5.3.1]. Finally, the system of *Gonno* I further discloses that the user terminal may select the component/media instance in accordance with the user environment/capabilities of the endpoint terminal [Page 66, Section 5.3.2, Resource Capability - "On the other hand,

media type (video, audio or text) or media format such as MIME type, will be selected or transformed dependent on the presentation resource capability"].)

b. Coded instructions for decoding the package metadata, coded instructions for identifying the components in the package metadata by using the identical CRID and the different IMIs (Page 66, Section 5.2 and 5.3.2 - See (c), supra).

c. Coded instructions for selecting the identified components in accordance to a usage environment of the user terminal (Page 66, Section 5.2 and 5.3.2). (The system of *Gonno* I discloses that the user terminal may select the component/media instance in accordance with the user environment/capabilities of the endpoint terminal [Page 66, Section 5.3.2, Resource Capability - "On the other hand, media type (video, audio or text) or media format such as MIME type, will be selected or transformed dependent on the presentation resource capability"].)

Regarding claim 79, *Gonno I* discloses assigning a CRID for each of the components that have identical contents and that have different bit expressions and for assigning the IMIs to each of the components that have identical contents and that have different bit expressions (Pages 65-66 - See Claim 74, Supra).

Gonno I fails to disclose a package metadata generator that carries out the coded instructions for assigning the CRID for each of the components that have identical contents and that have different bit expressions and for assigning the IMIs to each of the components that have identical contents and that have different bit expressions. In the same field of endeavor, *Lee* discloses a package metadata generator that carries out the coded instructions for

assigning the CRID for each of the components that have identical contents and that have different bit expressions and for assigning the IMIs to each of the components that have identical contents and that have different bit expressions (Page 7, The Table, Lowest Row, "Resource" is associated with a "ID & CRID", Page 10, Bottom Box, The ID Attributes are associated with both an "id" and a "crid"). (The system of *Lee* discloses encoding ID and CRID information in a package description of metadata including the generation of packaged metadata for transmission, which would include assigning the appropriate ID and CRID values that are a part of the metadata package [See Pages 4-6, Particularly Fig. 4 and Pages 6-7, Sections 4.1-4.2]. Also included in the package are references to multiple different format types for a particular object [Pages 9-12] [See Page 9, The figure - Showing multiple instances of the same format] [See also Page 10 - Showing the conversion of the MPEG-21 information to the TV-Anytime Format including the mime type/bit expression as the ID]. The system of *Lee* further discloses the linking of an ID and a CRID in metadata package, therefore the ID [i.e. instance metadata identifier] may be used to identify the associated content reference identifier [Page 10, The box at the bottom of page showing ID_ATTRS links the ID and CRID].)

Therefore, since *Lee* suggests packaging instance metadata in a Package Description utilizing a linked CRID and ID and *Gonno I* discloses a system which utilizes a CRID and a separate metadata instance identifier to uniquely identify media items, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the instance packaging of *Lee* with the system of *Gonno I* by packaging the CRID and separate instance identifier of *Gonno I* in a single package description, as taught by *Lee* and by encoding and transmitting the package to the user, as taught by *Gonno I*. The motive to combine is to allow the unique representation of media instances with the same CRID by using an additional instance identifier that is linked to the common CRID.

Regarding claim 80, *Gonno I* as modified by Lee, in claim 74, supra, discloses a TSPS wherein TSPS comprises an encoding and encapsulating using coded instructions for encoding and encapsulating the package metadata.

Gonno I as modified by Lee fails to disclose the use of a discrete software "unit" for encoding and encapsulating the package metadata such that the TSPS further comprises an encoding and encapsulating unit that carries out the coded instructions for encoding and encapsulating the package metadata. However, it is officially noted that the use of software modules to form "units" of software was well known in the art at the time of the invention. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to implement the encoding and encapsulating software of *Gonno I* as modified by Lee by using a separate software module. The motive to combine is to allow the separate software module to be separately coded and debugged, thereby reducing development time and expense.

Regarding claim 81, *Gonno I* discloses a transmitter that carries out instructions for transmitting the package metadata data (Page 66, Section 5.2 and 5.3.2 - See claim 74, Supra).

Gonno I as modified by Lee fails to disclose the use of a discrete software "unit" for transmitting the package metadata such that the TSPS comprises a transmitter unit that carries out the coded instructions for transmitting the package metadata. However, it is officially noted that the use of software modules to form "units" of software was sell known in the art at the time of the invention. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to implement the transmission software of *Gonno I* by using a separate software module. The motive to combine is to allow the separate software module to be separately coded and debugged, thereby reducing development time and expense.

Regarding claim 82, *Gonno I* discloses a receiver that carries out the coded instructions for receiving a package metadata generated according to a condition of a usage environment by using the IMI along with the CRID as a component identifier for components that have identical contents and different bit expressions (Page 66, Section 5.2 and 5.3.2 - See claim 74, supra).

Gonno I as modified by Lee fails to disclose the use of a discrete software "unit" for receiving the package metadata such that the TSPS comprises a receiving unit that carries out the coded instructions for receiving a package metadata generated according to a condition of a usage environment by using the IMI along with the CRID as a component identifier for components that have identical contents and different bit expressions. However, it is officially noted that the use of software modules to form "units" of software was sell known in the art at the time of the invention. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to implement the transmission software of *Gonno I* by using a separate software module. The motive to combine is to allow the separate software module to be separately coded and debugged, thereby reducing development time and expense.

Regarding claim 83, *Gonno I* discloses a decoding unit that carries out the coded instructions for decoding the package metadata, such that the user terminal consumes the components by using the IMI along with the CRID as a component identifier for components that have identical contents and different bit expressions (Page 66, Section 5.2 and 5.3.2 - See claim 65, supra).

Gonno I as modified by Lee fails to disclose the use of a discrete software "unit" for decoding the package metadata such that the TSPS comprises a decoding unit that carries out the coded instructions for decoding the package metadata, such that the user terminal consumes the components by using the IMI along with the CRID as a component identifier for components that have identical contents and different bit expressions. However, it is officially

noted that the use of software modules to form "units" of software was well known in the art at the time of the invention. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to implement the transmission software of *Gonno I* by using a separate software module. The motive to combine is to allow the separate software module to be separately coded and debugged, thereby reducing development time and expense.

5. **Claims 66-68, 76-78, 85-87 and 90-92** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Gonno I*, et al. (Y. Gonno, F. Nishio, T. Tsunoda, Y. Yamagishi, White Paper on Integrated Broadband Environment for Personalized TV Experience (IBEX) - Preliminary Edition, 2001, Pages 1-4), Lee et al. (H. Lee, J. Kim, K. Kang and J. Kim, Package and Component Schema using MPEG-21 DID, Proposal for the TV Anytime Forum, January 2004, Pages 1-16) and The TV Anytime Specification on Metadata Part B ("The Specification, Part B") (Author Unknown, The TV-Anytime Forum, Specification S-3 on Metadata - Part B: System Aspects in Unidirectional Environments, 15 August 2003, Pages 1-74) as applied to claims 65, 74, 84 and 88 and further in view of *Gonno II*, et al. (Y. Gonno, F. Nishio, T. Tsunoda, Y. Yamagishi, Integrated Broadband Environment for Personalized TV Experience (IBEX): Implementation Study and Practice, Proceedings of the Ninth ACM International Conference on Multimedia, 2001, Pages 546-548)

Regarding claims 66, 76, 85 and 90 *Gonno I* fails to disclose the package metadata is transmitted by using a one-way broadcasting system or two-way system through an internet protocol (IP) network. In the same field of endeavor, *Gonno II* discloses the package metadata is transmitted by using a one-way broadcasting system or two-way system through an internet protocol (IP) network (See Section 1, Page 547 - "As a practice of implementation, we are

investigating not only IP based uni/bi-directional transport for the use on the Internet but also MPEG-2 based uni-directional transport for the use on digital broadcasting networks.")

Therefore, since *Gonno II* suggests the use of unidirectional/bidirectional IP networks for the transport of the metadata, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the IP transport of *Gonno I* with the system of *Gonno II* by using an IP network to transport the metadata. The motive to combine is to improve system deployability by using a widely known transport protocol to distribute the data.

Regarding claims 67, 77, 86 and 91 *Gonno I* fails to disclose the package metadata is transmitted by using a two-way system through an internet protocol (IP) network. In the same field of endeavor, *Gonno II* discloses the package metadata is transmitted by using a two-way system through an internet protocol (IP) network (See Section 1, Page 547 - "As a practice of implementation, we are investigating not only IP based uni/bi-directional transport for the use on the Internet but also MPEG-2 based uni-directional transport for the use on digital broadcasting networks.")

Therefore, since *Gonno II* suggests the use of unidirectional/bidirectional IP networks for the transport of the metadata, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the IP transport of *Gonno I* with the system of *Gonno II* by using an IP network to transport the metadata. The motive to combine is to improve system deployability by using a widely known transport protocol to distribute the data.

Regarding claims 68, 78, 87 and 92 *Gonno I* fails to disclose the package metadata is transmitted by using a one-way broadcasting system. In the same field of endeavor, *Gonno II* discloses the package metadata is transmitted by using a one-way broadcasting system (See Section 1, Page 547 - "As a practice of implementation, we are investigating not only IP based

uni/bi-directional transport for the use on the Internet but also MPEG-2 based uni-directional transport for the use on digital broadcasting networks.")

Therefore, since *Gonno II* suggests the use of unidirectional broadcast networks for the transport of the metadata, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the unidirectional broadcast network of *Gonno I* with the system of *Gonno II* by using a broadcast network transport the metadata. The motive to combine is to use the efficiencies of a unidirectional broadcast network to broadcast content to many subscribers simultaneously.

Response to Arguments

4. Applicant's arguments, see Applicant's Arguments and remarks, filed 4 October 2010, with respect to the rejection of the previously presented claims under 35 USC 112, 1st Paragraph, 35 USC 112, 2nd Paragraph and 35 USC 101 have been fully considered and are persuasive in view of the Applicant's Amendments to the claims, the previous grounds of rejection has been withdrawn.

5. The remainder of The Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Crutchfield whose telephone number is (571) 270-3989. The examiner can normally be reached on Monday through Friday 8:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Ryman can be reached on (571) 272-3152. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher Crutchfield/
Examiner, Art Unit 2466
12/18/2010

/Daniel J. Ryman/
Supervisory Patent Examiner, Art Unit 2466